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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,162	10/05/2001	Takeo Suzuki	9281-4199	4955

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GENERAL NUMBER 00757
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EXAMINER

DESIR, JEAN WICEL

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,162

Applicant(s)

SUZUKI ET AL.

Examiner

Jean W. Désir

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/5/01, Pre-Amendment.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 8-11, 16, 17 and 20-23 is/are rejected.
7) ☒ Claim(s) 6, 7, 12-15, 18, 19 and 24-27 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Aschwanden (US 5,983,088).

Claim 1:

Aschwanden discloses all the claimed invention:

the claimed “a local oscillator which oscillates at a frequency range corresponding to a received TV signal having a predetermined frequency band” is met by col. 4 lines 59-63, specifically line 63, Figs. 2, 3, 5 item 64;

the claimed "a first programmable divider which receives a local oscillation signal of the local oscillator and divides the local oscillation signal" is met by col. 4 lines 64-66, Figs. 2, 3, 5 item 68;

the claimed "and a first mixer which mixes the received TV signal and an output of the first programmable divider and frequency converts the received TV signal into an intermediate-frequency signal having a predetermined frequency" is met by col. 4 lines 2-5, 9-11, col. 5 line 66 to col. 6 line 11;

the claimed "wherein a dividing rate of the first programmable divider is variable and set to 1 to receive a TV signal having a first frequency band and to at most 1/2 to receive a TV signal having a second frequency band, the second frequency band being lower than the first frequency band" is met by col. 5 lines 4-18.

Claim 2:

Aschwanden discloses all the claimed invention:

the claimed "a local oscillator which oscillates at a frequency range corresponding to a received TV signal having a predetermined frequency band" is met by col. 4 lines 59-63, Figs. 3, 5 item 13;

the claimed "a second programmable divider which receives a local oscillation signal of the local oscillator and divides the local oscillation signal" is met by col. 4 lines 64-66, Figs. 3, 5 item 13;

the claimed "a second mixer which mixes the received TV signal and the local oscillation signal and frequency converts the received TV signal into an intermediate-

frequency signal having a first frequency" is met by col. 5 line 66 to col. 6 line 11, col. 5 lines 51-56;

the claimed "and a third mixer which mixes the received TV signal and an output of the second programmable divider and frequency converts the received TV signal into an intermediate-frequency signal having a second frequency" is met by col. 5 line 66 to col. 6 line 11, col. 5 lines 57-62;

the claimed "wherein frequency conversion is carried out by the second mixer to receive a TV signal having a first frequency band" is met by col. 5 lines 51-56;

the claimed "and wherein frequency conversion is carried out by the third mixer to receive the TV signal having a frequency band lower than the predetermined frequency band" is met by col. 5 lines 51- 62.

Claim 3:

the claimed "wherein a dividing rate of the second programmable divider is variable" is met by col. 4 line 65 to col. 5 line 21, specifically lines 20-21;

the claimed "and dependent upon a geographical location in which the TV receiving tuner is disposed" is inherent to Aschwanden's disclosure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aschwanden (US 5,983,088).

Claim 8:

the claimed "wherein the local oscillator outputs an oscillation signal having a frequency band of at least 847 to 505 MHz" is met by col. 4 line 63 to col. 5 line 32;

the claimed "and wherein the dividing rate of the first programmable divider may be set to different values including 1, $1/3$ and $1/5$ " is not explicitly disclosed by Aschwanden's disclosure. However, the Aschwanden's disclosure would have rendered the claimed invention obvious to an artisan, because the dividing rate of the programmable divider of Aschwanden's disclosure can be changed for different groups of channels (see col. 5 lines 20-21). Therefore, the claimed invention would have been obvious to a person of ordinary skill in the art at the time the invention was made.

Claims 9-11 are rejected for the same reasons as claim 8.

5. Claims 4, 5, 16, 17, 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aschwanden (US 5,983,088) in view of prior art Fig. 3 discussed in the background of the instant application.

Claim 4:

Claim 4 that further limits claim 1 is not explicitly disclosed by Aschwanden's disclosure. However, claim 4 is very well known in the art; for instance prior art Fig. 3 shows: a first tracking filter (item 35), a second tracking filter (item 41), a PLL IC (item 53) to output a tuning voltage (item V_t), wherein the tuning voltage (item V_t) is applied to

the first tracking filter (item 35) and the second tracking filter (item 41) to tune a pass band of one of the first tracking filter and the second tracking filter to a frequency of the TV signal to be received, as claimed in claim 4. Aschwanden's disclosure in view of the prior art Fig. 3 would have rendered the claimed invention obvious; an artisan would be motivated to combine the reference to arrive at the claimed invention, this combination would provide a cost-effective TV receiving tuner. Therefore, the claimed invention would have been obvious to a person of ordinary skill in the art at the time the invention was made.

Claim 5 is disclosed, see background of the instant application on page 1 where the first tracking filter (item 35) and the second tracking filter (item 41) are a multi-tuning circuit as claimed.

Claim 16 is rejected for the same reasons as claim 4.

Claim 17 is rejected for the same reasons as claim 5.

Claim 20:

the claimed "wherein the local oscillator outputs an oscillation signal having a frequency band of at least 847 to 505 MHz" is met, see Aschwanden at col. 4 line 63 to col. 5 line 32;

the claimed "and wherein the dividing rate of the first programmable divider may be set to different values including 1, $1/3$ and $1/5$ " is not explicitly disclosed by the above combination. However, the above combination would have rendered the claimed invention obvious to an artisan, because the dividing rate of the programmable divider of Aschwanden's disclosure can be changed for different groups of channels (see col. 5

lines 20-21). Therefore, the claimed invention would have been obvious to a person of ordinary skill in the art at the time the invention was made.

Claims 21-23 are rejected for the same reasons as claim 20.

Allowable Subject Matter

6. Claims 6, 7, 12-15, 18, 19, 24-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

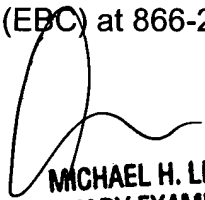
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean W. Désir whose telephone number is (703) 308 9571. The examiner can normally be reached on 5/4/9 - First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (703) 305 4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD
Mar. 20, 04



MICHAEL H. LEE
PRIMARY EXAMINER